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### REMARKS

This response is intended as a supplemental response to the non-final Office Action mailed March 2, 2005. The applicant's attorney thanks the Examiner for taking the time to discuss this application in detail. Further to that discussion, claim 1 has been amended. The remaining claims continue unamended.

In view of both the amendments presented above, the discussion within the prior response and the following discussion, Applicants submit that none of the claims now pending in the application are indefinite or obvious under the respective provisions of 35 U.S.C. §112 and 103.

### REJECTIONS

#### 35 U.S.C. §103(a)

##### Claims 1-9 (and 30-32)

The Examiner has rejected claims 1-9 under 35 U.S.C. §103(a) as being unpatentable over Saida et al. (US 2003/0031406, hereinafter "Saida"). In response, Applicants amended claim 1 to more clearly recite aspects of the invention by more clearly defining the respective positions of the various claimed structural elements, as well as the chain or series arrangements of the couplers within the multi-sectional couplers. Claims 30-32 were added in the prior response.

Specifically, claim 1 as present amended recites:

"An interleaver of optical channels, comprising:  
an input Y-branch waveguide having a first output and a second output;  
a first phase shifter, disposed between the first Y-branch waveguide output and a first input of a first multi-sectional coupler, the first multi-sectional coupler comprising at least two couplers connected in series;  
a second phase shifter, disposed between the second Y-branch waveguide output and a second input of the first multi-sectional coupler;

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a third phase shifter, disposed between a first output of the first multi-sectional coupler a first input of a second multi-sectional coupler, the second multi-sectional coupler comprising at least two couplers connected in series; and

a fourth phase shifter, disposed between a second output of the first multi-sectional coupler a second input of the second multi-sectional coupler; wherein

a first output of the second multi-sectional coupler is associated with a first group of optical channels; and

a second output of the second multi-sectional coupler is associated with a second group of optical channels."

In contrast to the above-quoted claim language, the Saida reference (and other references cited by the Examiner) fails to disclose or suggest claimed structure, including the series connection of two or more couplers forming each of the multi-sectional couplers.

By contrast, the structure noted by the Examiner as pertaining to the claimed invention (see Saida, FIG. 6, elements 19a-20b) comprise parallel groups of optical delay lines 15, rather than series connected couplers. Moreover, Saida utilizes X-branch couplers.

As such, Applicants submit that independent claim 1 is not obvious and fully satisfies the requirements of 35 U.S.C. §103 and is patentable thereunder. Therefore, the Applicant respectfully requests that the Examiner's rejection of claim 1 be withdrawn.

Furthermore, claims 2-9 and 30-32 depend, either directly or indirectly, from independent claim 1 and recite additional limitations thereof. As such, and at least for the same reasons as discussed above, Applicants submit that dependent claims 2-9 and 30-32 are also not obvious and fully satisfy the requirements of 35 U.S.C. §103 and are patentable thereunder. Therefore, Applicants respectfully request that the Examiner's rejection of claims 2-9 and 30-32 be withdrawn.

#### CONCLUSION

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Thus, Applicants submit that none of the claims presently in the application are indefinite or obvious under the respective provisions of 35 U.S.C. §103. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Eamon J. Wall at (732) 530-9404 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

Dated: \_\_\_\_\_

\_\_\_\_\_  
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CONCLUSION

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Respectfully submitted,

Dated: 8/1/05

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